ABSTRACT OF THE DISCLOSURE

An improved bar code symbol reading methodology/device/system includes a bar code symbol reading engine that reads bar code symbols affixed to objects proximate thereto and produces symbol character data representative of such bar code symbols. A data transmission subsystem, operably coupled to the bar code reading engine, communicates such symbol character data to the communication interface of a host system over a communication link therebetween. The data transmission subsystem implements a plurality of different communication interfaces. During an interface configuration mode of operation, the data transmission subsystem automatically cycles though at least one of the plurality of different communication interfaces whereby, for a given communication interface, the data transmission subsystem selectively activates the given communication interface (while disabling the other communication interfaces) and tests the communication link between the given communication interface and the host system to ascertain if the given communication interface corresponds to the communication interface of the host system. Upon detecting that the given communication interface corresponds to the communication interface of the host system, the interface configuration mode of operation ends, thereby enabling subsequent data communication between the bar code symbol reading device and the host system over the active communication interface. In this manner, the data transmission subsystem is able to automatically configure itself such that its interface is suitable for communication to the communication interface of the host system. Moreover, the device is thus capable of interfacing to a variety of different host devices in an automatic and error free manner with minimal human involvement, thus providing significant advantages over the prior art bar code symbol reading devices.

Preferably, the interface configuration mode of operation is carried out when the device is initially powered up. The communication interfaces implemented by the data transmission system of the device and the communication interface of the host system may support a plurality of different data communications links, including wireless data links (such an infra-red link, a Bluetooth RF link, and an IEEE 802.11b RF link), wired serial data links (such as a keyboard wedge link, an RS-232 link, USB link, an IEEE 1394 link, an RS-422 link, and a RS-485 link) or

other standard data links (such as an OCIA link, an IBM 46XX link, a Light Pen Emulation link, and a LTPN link).